

Listing of the Claims

This Listing of the Claims replaces any earlier Listing.

1. - 23. Canceled

24. (Previously presented) A vector containing the isolated DNA of claim 53.

25. (Previously presented) A transformant containing the isolated DNA of claim 53 which is a plant cell or plant tissue of a Brassica plant or a transformed Brassica plant.

26. (Previously presented) The transformant of claim 25 which is a transformed Brassica plant.

27. Canceled

28. (Previously presented) A transformant having a cytoplasmic male sterile gene wherein the isolated DNA of claim 53 is introduced with an induction type promoter into a cell of the transformant wherein the promoter is positioned with respect to the isolated DNA to enable transcription thereof in the transformant, so that the transformant can regulate expression of the cytoplasmic male sterile gene, wherein the transformant is a cell or tissue of a Brassica plant or a transformed Brassica plant.

29. (Previously presented) A method for maintaining a cytoplasmic male sterile Brassica line by crossing said line with the transformant of claim 28.

30.- 31. Canceled

32. (Previously presented) A plant-transforming vector which comprises a promoter DNA having an ability of transcribing an mRNA at least in an anther and the isolated DNA of claim 53, wherein the promoter is positioned with respect to the isolated DNA to enable transcription thereof.
33. Canceled
34. (Previously presented) A transformed Brassica plant having the vector of claim 32.
35. - 36. Canceled
37. (Previously presented) A seed, pollen, protoplast, cell, vegetative portion, hypocotyl, gamete or root, which is obtained from the transformant of claim 25 and which comprises said isolated DNA.
38. (Previously presented) A transformant of claim 25 which is a *Brassica napus* plant, wherein a seed which is obtained from the transformant has a glucosinolate content of 30 micromole/g seed or less.
39. (Previously presented) A seed which is obtained from the transformant of the *Brassica napus* plant of claim 38 and which comprises said isolated DNA.
40. (Previously presented) A hybrid plant seed of a Brassica plant having fertility restoration ability, produced by crossing a mother; which is a cytoplasmic male sterile line Brassica plant, with a pollen parent, which is a fertility restoring line Brassica plant, which is a transformed plant comprising a DNA sequence encoding the protein having the amino acid sequence of SEQ ID NO:3; and wherein the seed comprises a DNA sequence encoding the protein having the amino acid sequence of SEQ ID NO:3.

41. (Previously presented) The hybrid plant seed according to claim 40, wherein the cytoplasmic male sterile line plant of said mother is a cytoplasmic male sterile hybrid line derived from Ogura or Kosena radish.
42. Canceled
43. (Previously presented) The hybrid plant seed of a Brassica plant of claim 41, wherein the Brassica plant belongs to the species *Brassica napus*.
44. (Previously presented) The hybrid plant seed according to claim 43, wherein the glucosinolate content in the seed is 30 micromole/g seed or less.
45. - 46. Canceled
47. (Previously presented) A seed, pollen, protoplast, cell, vegetative portion, hypocotyl, gamete, or root, each comprising a DNA sequence encoding the protein having the amino acid sequence of SEQ ID NO:3 which is obtained by planting and growing the hybrid plant seed of claim 40.
48. - 52. Canceled
53. (Previously presented) An isolated DNA which encodes a protein involved in restoration of a cytoplasmic male sterile individual to fertility selected from the group consisting of:
- (1) an isolated DNA encoding the protein having the amino acid sequence of SEQ ID NO:3;
- (2) an isolated DNA having the nucleotide sequence of SEQ ID NO:1; and
- (3) an isolated DNA having the nucleotide sequence of SEQ ID NO. 2.

54. (Previously presented) The isolated DNA of claim 53 having the nucleotide sequence of SEQ ID NO:1.

55. – 58. Canceled

59. (Previously presented) An isolated DNA which encodes a protein involved in restoration of a cytoplasmic male sterile individual to fertility selected from the group consisting of:

(1) an isolated DNA which encodes a protein having the amino acid sequence of SEQ ID NO: 3;

(2) an isolated DNA which encodes a protein having an amino acid sequence that is 92% or more homologous to the amino acid sequence of SEQ ID NO:3; and

(3) an isolated DNA having 95% or higher homology to a DNA sequence encoding a protein having the amino acid sequence of SEQ ID NO:3.

60. - 62. Canceled

63. (Previously presented) The isolated DNA of claim 59 which encodes a protein having an amino acid sequence which has 95% or higher homology to the amino acid sequence of SEQ ID NO:3.

64. (Previously presented) The isolated DNA of claim 59 which encodes a protein having an amino acid sequence which has 97% or higher homology to the amino acid sequence of SEQ ID NO:3.

65. - 69. Canceled.

70. Canceled

71. - 72. Canceled

73. (Previously presented) A vector containing the isolated DNA of claim 59.

74. (Previously presented) A transformant containing the vector of claim 73, which is a plant cell, plant tissue or plant of the genus *Brassica*.

75. (Previously presented) A transformant comprising the isolated DNA of claim 59, which is a plant cell, plant tissue or plant of the genus *Brassica*.

76. (Previously presented) The transformant of claim 75 which is a transformed *Brassica* plant.

77. (Previously presented) The transformant of claim 76 which is a *Brassica napus* plant.

78. (Previously presented) A seed, pollen, protoplast, cell, vegetative portion, hypocotyl, gamete or root, each of which is obtained from the transformant of claim 76 and each of which comprises said isolated DNA.

79. (Previously presented) A seed, pollen, protoplast, cell, vegetative portion, hypocotyl, gamete or root, each of which is obtained from the transformant of claim 77 and each of which comprises said isolated DNA.

80. (Previously presented) A seed, pollen, protoplast, cell, vegetative portion, hypocotyl, gamete or root of a *Brassica* plant, each of which comprises the isolated DNA of claim 59.

81. (Previously presented) The seed, pollen, protoplast, cell, vegetative portion, hypocotyl, gamete or root of a Brassica plant of claim 80 wherein the Brassica plant is a *Brassica napus* plant.
82. (Previously presented) A transformant having a cytoplasmic male sterile gene wherein the isolated DNA of claim 59 is introduced with an induction type promoter into a cell of the transformant, wherein the promoter is positioned with respect to the isolated DNA to enable transcription thereof in a transformant so that the transformant can regulate expression of the cytoplasmic male sterile gene, wherein the transformant is a plant cell, plant tissue or plant of the genus Brassica.
83. (Previously presented) The transformant of claim 82 which is a plant cell, plant tissue or plant of the species *Brassica napus*.
84. (Previously presented) A method for maintaining a cytoplasmic male sterile Brassica line by crossing said line with the transformant of claim 82.
85. (Previously presented) A plant-transforming vector which comprises the isolated DNA of claim 59 and a promoter DNA having the ability to transcribe an mRNA at least in an anther wherein the promoter is positioned with respect to the isolated DNA to enable transcription thereof.
86. (Previously presented) A transformed Brassica plant having the plant-transforming vector of claim 85.
87. (Previously presented) A transformed *Brassica napus* plant having the plant-transforming vector of claim 85.
88. (Previously presented) A transformed plant of the species *Brassica napus* containing the plant-transforming vector of claim 85 wherein seed which is

- obtained from the transformed plant has a glucosinolate content of 30 micromole/g seed or less.
89. (Previously presented) The transformed *Brassica napus* plant of claim 88 wherein the glucosinolate content of the seed is 12 micromole/g seed or less.
90. (Previously presented) A seed which is obtained from the transformed plant of the species *Brassica napus* of claim 88 and which comprises said isolated DNA.
91. (Previously presented) A transformant or transformed plant comprising (1) the isolated DNA of claim 59, (2) a vector containing said isolated DNA, or (3) a plant-transforming vector containing said isolated DNA and a promoter DNA having the ability to transcribe an mRNA at least in an anther, wherein the promoter is positioned with respect to said isolated DNA to enable transcription thereof; wherein the transformant or transformed plant is homozygous for a gene encoding the protein involved in restoration of a cytoplasmic male sterile plant to fertility encoded by said isolated DNA; and wherein the transformant is a cell or tissue of a Brassica plant and the transformed plant is a Brassica plant.
92. (Previously presented) The transformant or transformed plant of claim 91 wherein the transformant is a cell or tissue of a *Brassica napus* plant and the transformed plant is a transformed *Brassica napus* plant.
93. (Previously presented) A transformant or transformed plant comprising (1) the isolated DNA of claim 59, (2) a vector containing said isolated DNA, or (3) a plant-transforming vector containing said isolated DNA and a promoter DNA having the ability to transcribe an mRNA at least in an anther, wherein the promoter is positioned with respect to said isolated DNA to enable

- transcription thereof; wherein, when the transformant or the transformed plant is regenerated, the regenerated individual can restore cytoplasmic male sterility to fertility; and wherein the transformant is a cell or tissue of a Brassica plant and the transformed plant is a Brassica plant.
94. (Previously presented) The transformant or transformed plant of claim 93 wherein the transformant is a cell or tissue of a *Brassica napus* plant and the transformed plant is a transformed *Brassica napus* plant.
95. (Previously presented) A hybrid plant seed of a Brassica plant having fertility restoration ability which comprises the isolated DNA of claim 59.
96. (Previously presented) A hybrid plant seed of a *Brassica napus* plant having fertility restoration ability which comprises the isolated DNA of claim 59.
97. (Previously presented) A bacterial host cell containing the vector of claim 73.
98. (Previously presented) The bacterial host cell of claim 97 which is a bacterium belonging to the genus *Escherichia* or *Agrobacterium*.
99. (Previously presented) A transformant comprising a vector of claim 24 which is a cell or tissue of a Brassica plant or is a Brassica plant.
100. (Previously presented) The transformant of claim 99 which is a cell or tissue of a *Brassica napus* plant or is a *Brassica napus* plant.
101. (Previously presented) The isolated DNA of claim 53 having the nucleotide sequence of SEQ ID NO. 2.
102. (Previously presented) A transformant or transformed plant comprising (1) the isolated DNA of claim 53, (2) a vector containing said isolated DNA, or (3) a plant-transforming vector containing said isolated DNA and a promoter

DNA having the ability to transcribe an mRNA at least in an anther, wherein the promoter is positioned with respect to said isolated DNA to enable transcription thereof; wherein the transformant or transformed plant is homozygous for a gene encoding the protein involved in restoration of a cytoplasmic male sterile plant to fertility encoded by said isolated DNA; and wherein the transformant is a cell or tissue of a Brassica plant and the transformed plant is a Brassica plant.

103. (Previously presented) A transformant or transformed plant comprising (1) the isolated DNA of claim 54, (2) a vector containing said isolated DNA, or (3) a plant-transforming vector containing said isolated DNA and a promoter DNA having the ability to transcribe an mRNA at least in an anther, wherein the promoter is positioned with respect to said isolated DNA to enable transcription thereof; wherein the transformant or transformed plant is homozygous for a gene encoding the protein involved in restoration of a cytoplasmic male sterile plant to fertility encoded by said isolated DNA; and wherein the transformant is a cell or tissue of a Brassica plant and the transformed plant is a Brassica plant.
104. (Previously presented) A transformant or transformed plant comprising (1) the isolated DNA of claim 101, (2) a vector containing said isolated DNA, or (3) a plant-transforming vector containing said isolated DNA and a promoter DNA having the ability to transcribe an mRNA at least in an anther, wherein the promoter is positioned with respect to said isolated DNA to enable transcription thereof; wherein the transformant or transformed plant is homozygous for a gene encoding the protein involved in restoration of a cytoplasmic male sterile plant to fertility encoded by said isolated DNA; and wherein the transformant is a cell or tissue of a Brassica plant and the transformed plant is a Brassica plant.

105. (Previously presented) An isolated DNA which encodes a protein involved in restoration of a cytoplasmic male sterile individual to fertility wherein the protein consists of the amino acid sequence of SEQ ID NO: 3.